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WEST VIRGINIA UNIVERSITY
AGRICULTURAL EXPERIMENT STATION,
MORGANTOWN, W. VA.

BULLETIN 72.

JAN. 1, 1901.

Commercial Fertilizers

BY J. H. STEWART AND D. H. HITE.



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[The Bulletins and Reports of this Station will be mailed free to any citizen of West Virginia upon written application. Address Director of Agricultural Experiment Station, Morgantown, W. Va.]

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COMMERCIAL FERTILIZERS.

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The following pages contain a complete report of the work required by the Fertilizer Law of this State for the year ending December 31, 1900.

The tables show that during the year, 167 brands of commercial fertilizers were submitted by manufacturers for registration in this State, and that of these 48.5 per cent. were complete fertilizers; 17.4 per cent. acid phosphates with potash; 5.9 per cent. bone meals; 1.8 per cent. dissolved bones, and 26.3 per cent. plain acid phosphates.

The valuations required by the Fertilizer Law are all based upon the analysis and the following prices of materials:

IN MIXED GOODS.

Available Phosphoric Acid.....	4c per lb.
Insoluble Phosphoric Acid.....	1c " "
Nitrogen	15c " "
Potash.....	5c " "

IN BONES.

Total Phosphoric Acid.....	2½c per lb.
Nitrogen.....	12c " "

Add in all cases \$2.50 to cover freight to an average shipping point and 20 per cent. on total amount, including freight, to cover agents' commission. This gives the relative commercial (retail) value as given in the table.

As relative values, these figures are, of course, correct; all being calculated on the same basis. As absolute values they are as near right as the most reliable information obtainable will enable us to make them. It is needless to say that no one is under any obligations to be governed by them. They are

published for the sole purpose of protecting farmers against exorbitant prices.

Table I contains the analyses and valuation of all brands submitted by manufacturers during the year 1900, together with the manufacturer's minimum guaranteed analyses, and the Station's valuations, calculated from these minimum guaranteed analysis.

Analysis of Commercial Fertilizers—1900.

COMMERCIAL FERTILIZERS.

WEST VIRGINIA EXPERIMENT STATION.

TABLE I.—Continued.

NAME AND ADDRESS OF MANUFACTURER.	NAME OF BRAND.	Soluble Phosphoric acid in Official Sample.	Soluble Phosphoric Acid Guaranteed.	Reverted Phosphoric Acid in Official Sample.	Reverted Phosphoric Acid Guaranteed.	Insoluble Phosphoric Acid in Official Sample.	Insoluble Phosphoric Acid Guaranteed.	Total Phosphoric Acid in Official Sample.	Total Phosphoric Acid Guaranteed.	Available Phosphoric Acid in Official Sample.	Available Phosphoric Acid Guaranteed.	Nitrogen in Official Sample.	Nitrogen Guaranteed.	Potash in Official Sample.	Potash Guaranteed.	Valuation of Official Sample.	Valuation According to Guaranteed Analysis.
		5.95	2.75	4.58	1.02	2.40	1.00	9.72	10.00	8.70	8.00	1.66	1.00	4.24	2.00	16.75	13.00
Baltimore Pulverizing Co., Balto.,	Special Spring & Fall Mixture.	5.95	2.75	4.58	1.02	2.40	1.00	9.72	10.00	8.70	8.00	1.66	1.00	4.24	2.00	16.75	13.00
Bowker Fert. Co., Boston, Mass....	Dissolved Bone Phosphate....	6.12	4.58	2.13	1.41	1.41	1.00	12.88	12.00	11.47	10.00	1.03	0.82	1.23	1.00	15.75	13.75
Bowker Fert. Co., Boston, Mass....	Dissolved Bone Phos. & Potash	9.34	3.80	3.27	2.47	2.58	1.00	16.58	16.00	14.11	14.00	1.03	0.82	1.22	1.00	18.00	15.75
Bowker Fert. Co., Boston, Mass....	Harvest Bone	6.14	3.80	3.27	2.47	2.58	1.00	16.58	16.00	14.11	14.00	1.03	0.82	1.22	1.00	18.00	15.75
Bowker Fert. Co., Boston, Mass....	Bone Meal	10.84	3.27	3.75	2.58	2.58	1.00	23.05	20.00	14.11	14.00	1.03	0.82	1.22	1.00	21.50	19.75
Bowker Fert. Co., Boston, Mass....	Bowker's Soluble Bone	5.76	3.75	3.27	2.47	2.58	1.00	16.58	16.00	14.11	14.00	1.03	0.82	1.22	1.00	18.00	15.75
Bowker Fert. Co., Boston, Mass....	Bowker's Apex Bone Phos....	5.76	3.75	3.27	2.47	2.58	1.00	16.58	16.00	14.11	14.00	1.03	0.82	1.22	1.00	18.00	15.75
Bradley Fertilizer Co., New York.	Dissolved Bone with Potash..	6.72	7.00	2.00	1.00	1.07	1.00	9.79	9.00	8.72	8.00	1.16	1.03	2.13	2.00	18.25	17.00
Bradley Fertilizer Co., New York..	Bean and Potato Phosphate..	8.23	1.94	1.94	1.45	2.00	1.00	11.62	10.00	10.17	8.00	1.20	0.82	3.38	4.00	2.50	19.00
Bradley Fertilizer Co., New York..	Niagara Phosphate	5.37	5.00	1.71	2.00	1.56	1.00	8.64	8.00	7.08	7.00	0.94	0.82	1.34	1.00	15.25	14.00
Bradley Fertilizer Co., New York..	Alkaline Bone with Potash...	9.43	3.25	3.25	2.30	1.00	1.00	11.98	11.00	12.68	10.00	1.03	0.82	2.04	2.00	18.25	15.25
Bradley Fertilizer Co., New York..	Soluble Dissolved Bone.....	11.32	12.00	3.30	2.00	3.10	1.00	17.72	15.00	14.62	14.00	1.03	0.82	2.04	2.00	18.25	15.25
Bradley Fertilizer Co., New York..	Abattoir Bone Dust.....	11.32	12.00	3.30	2.00	3.10	1.00	17.72	15.00	14.62	14.00	1.03	0.82	2.04	2.00	18.25	15.25
Chemical Co., of Canton, Baltimore	Baker's Standard Ground B'n	5.12	6.00	3.89	3.00	2.41	2.00	11.42	11.00	9.01	9.00	1.53	0.82	4.50	2.00	23.25	17.47
Chemical Co., of Canton, Baltimore	Baker's Sp. Wh't, C'n & G's M.	4.53	5.00	3.95	3.00	2.71	2.00	11.19	10.00	8.48	8.00	1.05	0.82	2.15	1.00	18.25	15.25
Chemical Co., of Canton, Baltimore	Harrow Brand Crop Grower..	11.32	7.00	2.68	3.00	0.64	2.00	14.65	12.00	14.01	10.00	1.03	0.82	4.60	2.00	22.00	15.50
Chemical Co., of Canton, Baltimore	Soluble Bone and Potash.....	11.32	7.00	2.68	3.00	0.64	2.00	14.65	12.00	14.01	10.00	1.03	0.82	4.60	2.00	22.00	15.50

TABLE I. — Continued.

NAME AND ADDRESS OF MANUFACTURER	NAME OF BRAND.	Soluble Phosphoric Acid in Official Sample.	Soluble Phosphoric Acid Guaranteed.	Reverted Phosphoric Acid in Official sample.	Reverted Phosphoric Acid Guaranteed.	Insoluble Phosphoric Acid in Official sample.	Insoluble Phosphoric Acid Guaranteed.	Total Phosphoric Acid in Official Sample.	Total Phosphoric Acid Guaranteed.	Available Phosphoric Acid in Official Sample.	Available Phosphoric Acid Guaranteed.	Nitrogen in Official Sample.	Potash in Official Sample.	Potash Guaranteed.	Valuation of Official Sample.	Valuation According to Guaranteed Analysis.
Chemical Co., of Canton, Baltimore		14.10	10.00	1.73	4.00	0.35	2.00	16.18	16.00	15.83	14.00	.....	.....	.....	18.25	17.40
Chicago Fertilizer Co., Chicago.	Baker's Pure Diss. S. C. Bone.	7.26	.....	1.46	.....	2.30	1.00	11.32	10.00	9.02	9.00	.....	.....	.....	12.25	12.00
Chicago Fertilizer Co., Chicago.	Mt. Pleasant Phosphate	7.41	.....	2.27	.....	1.68	1.00	11.36	9.00	9.68	8.00	1.18	0.82	1.80	1.00	19.00
Chicago Fertilizer Co., Chicago.	Wheat Special.	8.65	.....	2.73	.....	2.15	1.00	13.53	10.00	11.38	9.00	2.21	1.23	2.42	2.00	25.25
Chicago Fertilizer Co., Chicago.	Bone, Blood and Potash	7.37	.....	2.12	.....	2.09	1.00	11.58	9.00	9.49	8.00	3.58	2.46	5.45	4.00	32.00
Chicago Fertilizer Co., Chicago.	Standard Truck.	5.92	9.00	3.11	.....	2.79	1.00	11.82	11.00	9.03	9.00	2.75	2.46	2.31	2.00	25.00
Cleveland Dryer Co., Cleveland, O.	B'keye Am. Bone Superphos.	6.35	.....	3.05	.....	1.60	1.00	11.00	17.00	9.40	10.00	0.89	0.82	1.15	1.00	17.00
Cleveland Dryer Co., Cleveland, O.	Phospho Bone.	5.76	.....	3.44	.....	2.70	1.00	11.90	11.00	9.20	10.00	1.08	1.02	6.51	6.00	24.25
Cleveland Dryer Co., Cleveland, O.	Potato, Tob. & Gen. Crop Fert	8.70	.....	5.62	.....	0.95	2.00	15.27	16.00	14.32	14.00	.....	.....	.....	.....	17.00
Cleveland Dryer Co., Cleveland, O.	XXX Phosphate.	6.41	.....	3.74	.....	0.92	1.00	11.07	11.00	10.15	10.00	.....	.....	.....	.....	13.00
Cleveland Dryer Co., Cleveland, O.	Horsehead Phosphate.	7.11	.....	3.88	.....	0.90	1.00	11.87	11.00	10.49	10.00	.....	.....	.....	.....	16.25
Cleveland Dryer Co., Cleveland, O.	Horsehead Phos. with Potash.	2.88	6.00	10.58	.....	5.37	.....	18.83	20.00	13.46	.....	2.30	2.13	2.00	16.25	15.25
Cleveland Dryer Co., Cleveland, O.	Square Bone.	11.10	11.00	3.98	3.00	2.15	1.00	17.23	15.00	15.08	14.00	.....	.....	.....	25.50	23.00
Crocker Fert. & Chem. Co., Buffalo.	Dissolved Bone Phosphate.	4.40	5.00	2.94	2.00	2.41	1.00	9.75	8.00	7.34	7.00	1.29	0.82	1.08	1.00	16.50
Crocker Fert. & Chem. Co., Buffalo.	General Crop Phosphate.	4.13	6.00	3.92	2.00	4.03	1.00	12.08	9.00	8.05	8.00	2.36	2.05	3.24	3.00	24.00
Crocker Fert. & Chem. Co., Buffalo.	Potato, Hop & Tob. Phosphate	11.36	11.00	2.89	3.00	1.33	1.00	15.58	15.60	14.25	14.00	.....	.....	.....	17.00	16.75
Detrick Fert. & Chem. Co., Balto. ...	Diss. South Carolina Bone. ...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

WEST VIRGINIA EXPERIMENT STATION.

TABLE I.—Continued.

NAME AND ADDRESS OF MANUFACTURER.	NAME OF BRAND.	Soluble Phosphoric Acid in Official Sample.	Soluble Phosphoric Acid Guaranteed.	Reverted Phosphoric Acid in Official Sample.	Reverted Phosphoric Acid Guaranteed.	Insoluble Phosphoric Acid in Official Sample.	Insoluble Phosphoric Acid Guaranteed.	Total Phosphoric Acid in Official Sample.	Total Phosphoric Acid Guaranteed.	Available Phosphoric Acid in Official Sample.	Available Phosphoric Acid Guaranteed.	Nitrogen in Official Sample.	Nitrogen Guaranteed.	Potash in Official Sample.	Potash Guaranteed.	Valuation of Official Sample.	Valuation According to Guaranteed Analysis.
Detrick Fert. & Chem. Co., Balto...	Soluble Bone Phos & Potash F.	6.52	8.00	4.02	2.00	1.77	2.00	12.31	12.00	10.54	10.00	.....	.....	2.30	2.00	16.20	15.50
Detrick Fert. & Chem. Co., Balto...	Pa'gon Am'd Bone, Pho & Pot.	5.33	5.00	3.75	2.00	3.02	2.00	12.10	9.00	9.08	7.00	1.05	1.00	1.35	1.00	17.75	15.00
Detrick Fert. & Chem. Co., Balto...	Detrick's Imperial Comp....	4.36	6.00	2.67	2.00	2.30	2.00	9.33	10.00	7.03	8.00	1.00	1.00	10.33	2.00	26.25	17.25
Detrick Fert. & Chem. Co., Balto...	Detrick's Standard Pot. Fert.	3.62	5.00	2.58	1.00	3.16	1.00	9.36	7.00	6.20	6.00	1.80	1.23	5.05	5.00	22.25	19.50
Detrick Fert. & Chem. Co., Balto...	Fine Ground Animal Bone....	.....	.....	.....	.....	.....	.....	25.84	23.00	.....	.....	.....	2.68	2.06	.....	24.75	19.00
Detrick, Louis F., Baltimore.....	XXtra Acid Phosphate.....	11.71	11.00	2.60	3.00	1.30	1.00	15.61	15.00	14.31	14.00	.....	.....	.....	.....	17.00	16.75
Detrick, Louis F., Baltimore.....	Kangaroo Complete Komp'd.	5.37	6.06	3.49	2.00	3.84	3.50	12.7	11.50	8.86	8.00	2.26	1.64	2.29	3.00	23.25	21.00
Eureka Fert. Co., Ferryville, Md...	King's S. C. Bone.....	16.21	10.00	2.43	4.00	2.07	2.00	20.71	6.00	18.64	14.00	.....	.....	.....	.....	21.50	17.00
Great East. Fert. Co., Rutland Vt..	G. E. Corn Fertilizer.....	6.78	6.00	2.80	2.00	1.32	.....	10.39	8.00	9.67	8.00	0.33	0.83	4.52	4.00	21.25	18.50
Great East. Fert. Co., Rutland. Vt..	G. E. Vegetable, Vine & Tob..	6.72	6.00	3.63	2.00	4.14	.....	14.49	8.00	10.35	8.00	2.15	2.05	3.87	3.25	26.25	22.00
Great East. Fert. Co., Rutland, Vt..	G. E. Special.....	7.60	6.00	2.20	2.00	1.82	.....	11.71	8.00	9.89	8.00	1.85	1.64	2.22	2.00	22.25	19.00
Great East. Fert. Co., Rutland, Vt..	G. E. English Wheat Grower.	7.65	6.00	2.23	2.00	1.68	...	11.56	8.00	9.88	8.00	1.61	0.82	2.01	2.00	21.00	16.00
Great East. Fert. Co., Rutland, Vt..	G. E. Soluble Bone & Potash.	8.32	9.00	3.00	2.00	1.60	...	13.01	11.00	11.41	11.00	.....	.....	2.47	2.00	16.75	16.00
Great East. Fert. Co., Rutland, Vt..	G. E. Dissolved Bone	12.01	12.00	2.38	2.00	1.22	...	15.61	14.00	14.39	14.00	.....	.....	.....	.....	17.00	16.50
Hardy Packing Co., Chicago.....	Crop Producer.....	7.28	.....	2.06	.....	2.25	1.00	11.59	9.00	9.31	8.00	1.27	0.82	1.88	1.00	19.25	15.00
Hardy Packing Co., Chicago.....	Wheat Grower.....	6.87	.....	3.31	.....	1.59	1.00	11.77	9.00	10.18	8.00	0.69	0.41	2.63	2.50	18.75	15.50
Hardy Packing Co., Chicago.....	Southern Phosphate.....	7.43	.....	2.51	.....	1.34	1.00	11.28	10.00	9.94	9.00	.....	.....	.....	.....	12.75	12.00

TABLE 1. — *Continued*

NAME AND ADDRESS OF MANUFACTURER.	NAME OF BRAND.	Soluble Phosphoric Acid in Official Sample.	Soluble Phosphoric Acid Guaranteed.	Reverted Phosphoric Acid in Official Sample.	Reverted Phosphoric Acid Guaranteed.	Insoluble Phosphoric Acid in Official Sample.	Insoluble Phosphoric Acid Guaranteed.	Total Phosphoric Acid in Official Sample.	Total Phosphoric Acid Guaranteed.	Available Phosphoric Acid in Official Sample.	Available Phosphoric Acid Guaranteed.	Nitrogen in Official Sample.	Nitrogen Guaranteed.	Potash in Official Sample.	Potash Guaranteed.	Valuation of Official Sample.	Valuation According to Guaranteed Analysis.
		8.55	8.00	3.12	2.00	1.48	1.00	13.15	11.00	11.07	10.00	...	...	5.61	1.00	17.75	14.00
Hess, S. M., & Bro., Philadelphia....	Emperor Phosphate.....	10.80	12.00	3.93	2.00	1.56	1.00	16.38	15.0	14.82	14.00	...	...	...	...	17.50	16.75
Hess, S. M., & Bro., Philadelphia....	Soluble Bone.....	6.07	7.00	3.36	1.00	1.36	1.00	11.39	9.00	10.03	8.00	1.08	0.80	2.50	1.00	20.00	15.00
Hess, S. M., & Bro., Philadelphia....	Keystone Bone Phosphate....	7.85	...	2.29	...	1.41	1.00	11.55	11.05	10.14	0.00	1.22	1086	1.40	1.00	19.25	17.25
Jarecki Chemical Co., Sandusky, O....	Number One Fish Guano.....	11.3	2.08	...	...	1.58	1.00	14.79	15.00	13.21	14.00	...	...	...	...	16.00	16.75
Jarecki Chemical Co., Sandusky, O....	C. O. D. Phosphate.....	4.80	...	1.41	...	0.95	1.00	7.16	7.00	6.21	6.00	0.73	0.40	0.85	0.50	12.75	11.00
Jarecki Chemical Co., Sandusky, O....	O. K. Fertilizer.....	11.73	9.00	2.93	5.00	0.72	0.50	15.38	14.50	14.65	14.00	...	...	...	...	17.25	16.50
Maryland Fert. & Mfg Co., Balt., Md	Dissolved S. C. Bone.....	8.20	7.0	7.38	3.00	0.54	1.00	16.12	11.00	15.58	10.00	...	...	2.20	2.00	20.75	15.25
Maryland Fert. & Mfg Co., Balt., Md	Bono Superphosphate.....	8.70	8.0	3.84	4.00	0.64	1.00	13.18	13.00	12.51	12.00	...	...	5.01	5.00	21.25	20.75
Maryland Fert. & Mfg Co., Balt., Md	Tornado Fertilizer.....	5.08	7.00	4.69	2.00	1.37	...	11.14	10.00	9.77	9.00	0.83	0.82	2.46	2.00	18.75	17.00
Maryland Fert. & Mfg Co., Balt., Md	Magie Guano.....	...	...	...	...	...	...	12.29	12.00	...	...	2.23	1.61	1.89	2.00	19.00	18.50
Marietta Bone and Phos. Co., Marietta, O.	Bone and Animal Tankage....	1.12	...	6.19	...	5.49	...	12.80	12.00	7.31	10.00	1.82	3.00	1.63	2.00	19.75	25.76
Marietta Bone and Phos. Co., Marietta, O.	Superphosphate.....	5.04	6.00	2.28	2.00	3.45	...	0.77	10.00	7.82	8.00	2.14	1.64	2.46	2000	21.50	19.00
Northwestern Fert. Co., Chicago....	Garden City Superphosphate.	8.70	7.00	1.63	2.00	0.93	...	11.26	11.00	10.33	9.00	1.90	1.75	2.75	2.00	23.2	17.00
Ober, G., & Sons Co., Baltimore, Md	Farmers' Stand. Am'd Phos....	7.00	6.00	2.28	2.00	1.59	...	10.87	11.00	9.28	8.00	2.24	1.65	4.39	2.00	25.50	19.00
Ober, G., & Sons Co., Baltimore, Md	Shenandoah Bone Phosphate	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

TABLE I.—Continued.

NAME AND ADDRESS OF MANUFACTURER.	NAME OF BRAND.	Soluble Phosphoric Acid in Official Sample.	Soluble Phosphoric Acid (Guaranteed).	Reverted Phosphoric Acid in Official Sample.	Reverted Phosphoric Acid (Guaranteed).	Insoluble Phosphoric Acid in Official Sample.	Insoluble Phosphoric Acid (Guaranteed).	Total Phosphoric Acid in Official Sample.	Total Phosphoric Acid (Guaranteed).	Available Phosphoric Acid in Official Sample.	Available Phosphoric Acid (Guaranteed).	Nitrogen in Official Sample.	Nitrogen (Guaranteed).	Potash in Official Sample.	Potash Guaranteed.	Valuation of Official Sample.	Valuation According to Guaranteed Analysis.
Ober, G., & Sons Co., Baltimore, Md	Farmers' Mixture..	9.63	7.00	1.46	2.00	0.87	2.00	11.35	11.00	10.19	9.00	1.16	0.75	2.58	2.00	20.50	17.25
Ober, G., & Sons Co., Baltimore, Md	Diss. Bone Phos. and Potash..	9.53	9.00	2.14	2.00	0.68	2.00	12.35	13.00	11.67	11.00	....	....	2.51	2.00	17.50	16.50
Ober, G., & Sons Co., Baltimore, Md	Dissolved Bone Phosphate....	12.28	11.00	2.59	3.00	0.87	2.00	15.94	16.00	14.87	14.00	....	....	....	....	17.50	17.00
Ober, G., & Sons Co., Baltimore, Md	S. & S. Special Wheat Comp.	6.73	6.50	2.57	2.00	1.89	....	11.19	10.00	9.30	8.50	2.15	1.40	4.75	2.00	25.75	18.50
Ober, G., & Sons Co., Baltimore, Md	Special Mixture for Wheat....	4.20	7.00	5.01	2.00	5.18	....	14.39	11.00	9.21	9.00	1.16	1.00	2.81	2.00	20.50	17.75
Ohio Farmers Fer. Co., Columbus, O	Acid Phosphate.....	7.32	....	2.44	....	1.75	2.00	11.51	11.00	9.76	9.00	....	....	....	....	12.75	12.00
Ohio Farmers' Fer. Co., Columbus, O	General Crop Fish Guano....	8.48	....	1.55	....	2.63	2.00	12.00	10.00	10.03	8.00	1.12	0.82	2.06	1.00	20.25	15.25
Ohio Farmers' Fer. Co., Columbus, O	Potato and Truck Fertilizer...	7.80	....	2.50	....	1.62	1.00	11.92	9.00	10.30	8.00	3.32	2.46	5.41	4.00	31.75	24.50
Ohio Farmers' Fer. Co., Columbus, O	Corn, Oats & Wheat Fish Guano	7.23	....	4.33	....	2.00	2.00	13.61	11.00	11.61	9.00	1.79	1.23	2.75	2.00	24.25	19.00
{ Old Dominion Guano Co., Branch	O. D. Special Wheat Guano ...	6.97	....	2.60	....	1.61	....	11.18	....	9.57	8.00	2.17	1.65	3.70	2.00	24.25	19.00
{ Va.-Carolina Chem. Co., Richmond	O. D. High Grade Bone Phos...	11.99	....	1.76	....	2.14	....	15.89	....	13.75	13.00	....	....	....	....	16.75	15.50
{ Old Dominion Guano Co., Branch.	High Grade Alka Bone & Pot.	9.52	....	2.88	....	1.70	....	14.07	....	12.37	10.00	....	....	2.41	2.00	17.00	15.00
{ Va.-Carolina Chem. Co., Richmond	Royster's High Grade Acid Ph.	10.11	....	3.11	....	2.55	....	15.77	....	13.22	12.00	....	....	....	....	16.25	14.50
Pacific Guano Co., New York	Pacific Potato Phosphate.....	6.49	5.00	1.18	1.00	1.74	1.00	10.41	7.00	8.67	6.00	1.62	1.24	6.04	5.00	24.75	19.50
Pacific Guano Co., New York	Nobsque Guano	7.66	7.00	1.17	1.00	1.02	....	9.85	9.00	8.83	8.00	1.07	1.03	2.15	2.00	18.25	16.75
Pacific Guano Co., New York	A1 Phosphate.....	8.22	5.22	2.32	2.00	1.61	2.00	9.15	8.00	7.54	7.00	0.94	0.82	1.42	1.00	15.75	14.25
Pacific Guano Co., New York	Ground Bone and Potash	9.54	....	3.67	....	2.35	1.00	15.56	11.00	13.21	10.00	....	....	2.20	2.00	18.75	15.23

TABLE I.—Continued.

NAME AND ADDRESS OF MANUFACTURER.	NAME OF BRAND.	ANALYSIS.													Valuation According to Guaranteed Analysis.		
		Soluble Phosphoric Acid in Official Sample.	Soluble Phosphoric Acid Guaranteed.	Reverted Phosphoric Acid in Official Sample.	Reverted Phosphoric Acid Guaranteed.	Insoluble Phosphoric Acid in Official Sample.	Insoluble Phosphoric Acid Guaranteed.	Total Phosphoric Acid in Official Sample.	Total Phosphoric Acid Guaranteed.	Available Phosphoric Acid in Official Sample.	Available Phosphoric Acid Guaranteed.	Nitrogen in Official Sample.	Nitrogen Guaranteed.	Potash in Official Sample.		Potash Guaranteed.	Valuation of Official Sample.
Pacific Guano Co., New York.	Diss. Bone Phosphate of Lime	2.46	12.00	1.99	2.00	1.09	1.00	15.51	15.00	14.45	14.00	1.99	1.65	.....	.....	17.00	16.75
Pacific Guano Co., New York.	Fine Ground Bone.	.....	.....	.....	.....	.....	.....	19.43	14.00	.....	.....	1.99	1.65	.....	.....	20.50	16.25
Piedmont-Mt. Airy Guano Co., Balto	Pure Raw Bone Mixture.	7.10	.....	2.42	.....	1.85	.....	11.37	.....	9.52	8.00	1.32	1.02	2.53	1.50	20.25	16.25
Piedmont-Mt. Airy Guano Co., Balto	Royal Am. Bone and Potash.	5.81	.....	2.10	.....	0.75	.....	8.66	.....	7.91	6.00	1.11	1.07	3.42	3.00	19.00	16.25
Piedmont-Mt. Airy Guano Co., Balto	Dis. Bone Phos. Potash Goods.	8.78	.....	2.24	.....	0.88	.....	11.45	.....	11.07	10.50	.....	.....	1.98	1.00	16.25	14.25
Piedmont-Mt. Airy Guano Co., Balto	High Grade S. C. Bone.	10.20	.....	3.82	.....	2.16	.....	16.18	.....	14.02	14.00	.....	.....	.....	.....	17.00	16.50
R. H. Pollock, Baltimore	Dissolved S. C. Bone	10.87	.....	4.59	.....	1.22	.....	16.68	15.00	15.46	14.00	.....	.....	.....	.....	18.25	16.50
R. H. Pollock, Baltimore.	Victor Bone Phosphate.	5.12	.....	5.54	.....	0.60	.....	11.26	10.00	10.66	9.00	.....	.....	1.36	1.00	15.00	12.75
W. S. Powell & Co., Baltimore.	Powell's "Red Bag" Fertilizer.	2.21	6.00	5.29	2.00	2.83	.....	10.33	10.00	7.50	8.00	1.11	1.00	3.67	1.00	19.25	15.50
W. S. Powell & Co., Baltimore	Powell's Bone and Potash.	6.32	8.00	3.34	2.00	2.18	1200	11.84	.....	9.66	10.00	.....	.....	5.34	2.00	19.25	15.00
W. S Powell & Co., Baltimore.	Powell's Dissolved S. C. Bone.	12.15	12.00	2.54	2.00	1.69	.....	16.38	16.00	14.69	14.00	.....	.....	.....	.....	17.50	16.50
Ramsburg Fert. Co., Frederick, Md	Excelsior Plant Food	5.27	7.00	5.86	2.00	2.36	.....	13.49	12.00	11.13	9.00	2.00	1.90	1.76	2.00	23.50	20.75
Ramsburg Fert. Co., Frederick, Md.	Dissolved Bone Superphos	7.63	10.00	4.89	4.00	3.43	.....	15.95	16.00	12.52	14.00	.....	.....	.....	.....	15.75	16.50
Rasin-Monumental Co., Balto., Md.	Empire Guano.	7.84	7.00	5.55	1.00	1.46	1.50	14.83	9.50	13.87	8.00	2.62	1.64	4.64	2.00	31.25	19.25
Rasin-Monumental Co., Balto., Md.	Dissolved Bone.	7.74	8.50	1.86	1.50	3.07	.....	12.67	11.50	9.60	10.00	2.32	1.64	.....	.....	21.25	18.75
Rasin-Monumental Co., Balto., Md.	Bone and Potash Fert.	10.22	8.50	1.18	1.50	0.41	.....	11.81	.....	11.40	10.00	.....	.....	4.15	2.00	26.75	15.00

TABLE I.—Continued.

NAME AND ADDRESS OF MANUFACTURER.	NAME OF BRAND.	NAME OF BRAND.																	
		Soluble Phosphoric Acid in Official Sample.	Soluble Phosphoric Acid Guaranteed.	Reverted Phosphoric Acid in Official Sample.	Reverted Phosphoric acid Guaranteed.	Insoluble Phosphoric Acid in Official Sample.	Insoluble Phosphoric Acid Guaranteed.	Total Phosphoric Acid in Official Sample.	Total Phosphoric Acid Guaranteed.	Available Phosphoric Acid in Official Sample.	Available Phosphoric Acid Guaranteed.	Nitrogen in Official Sample.	Potash in Official Sample.	Potash Guaranteed.	Valuation of Official Sample.	Valuation According to Guaranteed Analysis.			
Rasin-Monumental Co., Balto., Md.	Acid Phosphate.....	12.83	12.50	1.11	1.70	0.64	.....	14.58	.....	13.94	4.00	.....	.....	.....	16.50	16.50	
Rasin-Monumental Co., Balto., Md.	Mon't Wm. Penn Crop Grower.	8.26	7.00	1.84	1.00	1.23	.....	11.32	.....	10.09	8.00	1.13	0.82	1.31	1.00	18.75	14.75
Reese, John S., & Co., Balto., Md.....	Flm Phosphate.....	8.75	11.00	4.93	3.00	1.48	1.00	15.16	15.00	13.08	14.00	.....	.....	.....	16.50	16.75	
Reese, John S., & Co., Balto., Md.....	Half and Half.....	2.85	5.00	5.66	2.00	1.79	2.00	10.70	9.00	8.51	7.00	1.42	0.82	1.24	1.00	18.25	14.25		
Robinson, Isaac, Baltimore.....	High Grade Soluble Phos.....	12.15	10.00	2.18	4.00	0.58	.....	14.91	.....	14.33	14.00	.....	.....	.....	17.00	16.50	
Southern Fertilizing Co., York, Pa	Diss. Bone Phosphate.....	8.44	12.00	5.37	2.00	1.54	.....	15.35	14.00	13.81	14.00	.....	.....	.....	16.50	16.50	
Southern Fertilizing Co., York, Pa.	Soluble Bone Phosphate.....	8.28	9.50	3.05	1.50	1.87	.....	13.20	11.00	11.33	11.00	.....	.....	2.07	2.00	16.75	16.00
Susquehanna Fert. Co., Baltimore.	XX Phosphate.....	4.36	.....	4.66	.....	2.93	1.00	11.95	9.00	9.02	8.00	1.16	0.82	1.46	1.00	18.25	15.00
Susquehanna Fert. Co., Baltimore.	Superior Rock Phosphate.....	11.92	.....	3.58	.....	1.71	1.00	17.21	15.00	15.70	14.00	.....	.....	.....	.....	18.25	16.75
Swift & Co., Chicago.....	Phoshate and Potash.....	9.24	7.00	4.83	5.00	1.19	1.00	15.26	13.00	14.07	12.00	.....	.....	1.58	2.00	18.75	17.25
Swift & Co., Chicago.....	Potato and Tobacco Grower..	7.48	6.00	3.14	4.00	0.83	1.00	11.45	11.00	10.62	10.00	3.71	3.25	5.89	5.00	33.75	30.50		
Swift & Co., Chicago.....	Ammonia Bone and Potash....	6.78	5.00	3.20	3.00	2.44	3.00	12.42	11.00	9.98	8.00	2.82	1.75	2.84	2.00	25.75	20.00		
Swift & Co., Chicago.....	Ammoniated Bone and Pot....	.....	.....	.....	.....	.....	.....	14.93	16.00	.....	.....	5.10	4.75	3.15	3.00	30.50	30.00
Swift & Co., Chicago.....	Complete Fertilizer.....	5.37	5.00	2.71	3.00	3.79	3.00	11.87	11.00	8.08	8.00	1.42	1.25	1.77	1.00	19.00	17.00		
Swift & Co., Chicago.....	Bone Meal.....	.....	.....	.....	.....	.....	.....	25.59	25.00	.....	.....	.....	2.08	2.50	.....	26.00	25.25
Swift & Co., Chicago.....	Diamond Phosphate.....	8.83	6.00	4.87	4.00	1.23	1.00	14.93	11.00	13.70	10.00	.....	.....	.....	.....	16.50	12.75
Swift & Co., Chicago.....	Superphosphate.....	5.81	5.00	3.51	3.00	5.08	4.00	14.40	12.00	9.32	8.00	2.71	2.50	2.41	2.00	25.75	23.00		

TABLE I.—Continued.

NAME AND ADDRESS OF MANUFACTURER.	NAME OF BRAND.	Soluble Phosphoric Acid in Official Sample.	Soluble Phosphoric Acid Guaranteed.	Reverted Phosphoric Acid in Official Sample.	Reverted Phosphoric Acid Guaranteed.	Insoluble Phosphoric Acid in Official Sample.	Insoluble Phosphoric Acid Guaranteed.	Total Phosphoric Acid in Official Sample.	Total Phosphoric Acid Guaranteed.	Available Phosphoric Acid in Official Sample.	Available Phosphoric Acid Guaranteed.	Nitrogen in Official Sample.	Nitrogen Guaranteed.	Potash in Official Sample.	Potash Guaranteed.	Valuation of Official Sample.	Valuation According to Guaranteed Analyses.
Swift & Co., Chicago.....	Swift's Bone and Potash	.....	.....	.....	.....	.....	.....	25.33	23.50	.....	.....	2.40	2.50	3.22	3.00	29.00	29.00
Swift & Co., Chicago.....	Pure Acid Phosphate.....	10.73	10.00	5.45	6.00	1.05	.....	17.23	17.00	16.18	16.00	.....	.....	.....	.....	18.75	18.50
Thomas, I. P., & Son Co., Phila.....	Alkaline Bone	6.40	.....	3.04	.....	1.55	.....	10.99	11.00	9.44	10.00	.....	.....	2.63	2.00	15.50	15.00
Thomas, I. P., & Son, Phila.....	S. C. Bone.....	8.37	.....	6.18	.....	2.70	.....	16.25	16.00	14.55	14.00	.....	.....	.....	.....	17.50	16.50
United States Fert. Co., Wheeling ..	Good Investment.....	3.90	7.00	2.42	0.50	1.48	1.50	7.80	9.00	6.32	7.50	1.32	2.00	2.69	2.00	18.00	24.25
Va.-Carolina Chem. Co., Richmond	Guaranteed 14 per ct. Ac. Phos.	11.09	11.00	4.43	4.00	1.02	1.00	16.54	15.00	15.52	14.00	.....	.....	.....	.....	18.25	16.75
Va.-Carolina Chem. Co., Richmond	Stand. Bone and Potash.....	9.04	7.00	2.30	4.00	1.30	1.00	12.64	11.00	11.34	10.00	.....	.....	2.00	2.00	16.50	15.25
Virginia-Carolina Chemical Co., Allison & Addison Branch, Richmond.	"Star Brand" Guano.....	7.87	.....	0.37	.....	2.62	.....	11.46	.....	8.84	8.00	1.64	1.61	1.14	1.00	19.25	17.75
	"Little Giant" Gr. and Gr. Gr.	8.44	.....	0.30	.....	1.85	.....	10.59	.....	8.74	8.00	0.89	1.00	2.51	2.00	18.00	16.75
	"B. P." Potash Mixture	9.56	.....	1.05	.....	1.48	.....	12.09	.....	10.61	10.00	.....	.....	2.51	2.00	16.50	15.00
	"IXL" Acid Phosphate.....	11.08	.....	2.79	.....	2.38	.....	16.23	.....	13.87	13.00	.....	.....	.....	.....	16.75	15.50
	"Standard" Acid Phosphate..	6.63	.....	6.17	.....	1.98	.....	14.78	.....	12.80	12.00	.....	.....	.....	.....	15.75	14.50
Champion Corn Grower Fert.	.....	6.43	6.00	2.39	3.00	0.97	1.00	9.79	9.00	8.82	8.00	1.49	1.00	2.69	2.00	20.25	17.00
Capital Bone Potash Comp'nd	.....	9.04	7.00	2.34	4.00	1.23	1.00	12.61	11.00	11.38	10.00	.....	.....	2.27	2.00	17.00	15.25
Travers' Dis. Bone Phosphate.	.....	10.99	11.00	4.54	4.00	1.25	1.00	16.78	15.00	15.53	14.00	.....	.....	.....	.....	18.25	16.75
Capital Dissolved S. C. Bone..	.....	9.15	9.00	3.49	4.00	1.20	1.00	13.84	13.00	12.64	12.00	.....	.....	.....	.....	15.50	14.75
Beef Blood and Bone Fert. ....	.....	5.63	5.00	4.42	3.00	1.09	1.00	11.14	9.00	10.05	8.00	1.44	1.64	1.66	1.00	20.25	18.00

TABLE I.—Continued.

NAME AND ADDRESS OF MANUFACTURER.	NAME OF BRAND.	Soluble Phosphoric Acid	Soluble Phosphoric Acid	Reverted Phosphoric Acid	Reverted Phosphoric Acid	Insoluble Phosphoric Acid	Insoluble Phosphoric Acid	Total Phosphoric Acid in	Total Phosphoric Acid	Available Phosphoric Acid	Available Phosphoric Acid	Nitrogen in Official Sample.	Nitrogen Guaranteed.	Potash in Official Sample.	Potash Guaranteed.	Valuation of Official Sample.	Valuation According to Guaranteed Analyses.
		In Official Sample.	Guaranteed.	In Official Sample.	Guaranteed.	In Official Sample.	Guaranteed.	Official Sample.	Guaranteed.	In Official Sample.	Guaranteed.	...	...	...	...	...	...
Zell Guano Co., Baltimore, Md.	Electric Phosphate.....	9.50	.....	0.77	.....	2.32	2.00	12.08	12.00	10.36	10.00	...	...	2.00	2.00	16.25	16.50
Zell Guano Co., Baltimore, Md.	Dissolved Bone Phosphate.....	13.01	.....	1.05	.....	2.11	2.00	16.17	16.00	14.06	14.00	...	...	...	...	17.00	17.00
Zell Guano Co., Baltimore, Md.	Dissolved S, C. Phosphate.....	11.00	8.00	2.12	6.00	2.65	.....	15.17	16.00	13.12	14.00	...	...	...	...	16.00	16.50

Table II contains the analyses and valuation of the samples collected by the authorized inspectors, of such brands as could be found on sale in the State, together with a few samples submitted by farmers in accordance with instructions of the Director of the Station. In order that the composition of the goods on sale in the State may be more readily compared with the composition of the sample submitted by the manufacturer (official sample,) the two are arranged in parallel columns.

We have always insisted that if the mixing and sampling is reasonably well done there ought not to be a difference of more than about \$1.00 between the valuation of the sample submitted by the manufacturer and the samples of the same fertilizers found on sale in the State. We fully realize the difficulties connected with the mixing and sampling of the enormous quantities in which some brands are manufactured, and yet \$1.00 is about five per cent. of the value of the average fertilizer, and it would seem that this ought to be sufficient margin for valuations.

We are frequently told that this margin is too narrow, and this may be true. but we do not think it is. There is one point, however, upon which we have always insisted, and which will not be denied, and that is that the samples found on sale should not always fall below the sample submitted by the manufacturer, but that they should run above the official sample about as much and about as often as they fall below it.

The results of this year's inspection work as shown in the following table leave little room to suspect that in submitting the official samples the manufacturers had any intention of being anything else than fair.

TABLE II.

Analyses of Commercial Fertilizers, 1900.

NAME AND ADDRESS OF MANUFACTURER.	NAME OF BRAND.	Agent's Number.	Soluble Phosphoric Acid in Official Sample.	Soluble Phosphoric Acid in Inspector's Sample.	Reverted Phosphoric Acid in Official Sample.	Reverted Phosphoric Acid in Inspector's Samples.	Insoluble Phosphoric Acid in Official Sample.	Insoluble Phosphoric Acid in Inspector's Sample.	Total Phosphoric Acid in Official Sample.	Total Phosphoric Acid in Inspector's Sample.	Available Phosphoric Acid in Official Sample.	Available Phosphoric Acid in Inspector's Sample.	Nitrogen in Official Sample.	Nitrogen in Inspector's Sample.	Potash in Official Sample.	Potash in Inspector's Sample.	Valuation of Official Sample.	Valuation of Inspector's Sample.	Difference in Valuation	
			34	11.46	10.29	5.36	6.53	1.73	1.61	18.55	18.43	16.82	16.82	2.29	1.87	3.07	3.07	19.50	19.50	
Armour Fert. Works, Chicago.....	Star Phos phosphate.....	34	11.46	10.29	5.36	6.53	1.73	1.61	18.55	18.43	16.82	16.82	2.29	1.87	3.07	3.07	19.50	19.50		
Armour Fert. Works, Chicago.....	Grain Grower.....	10	4.54	2.80	3.93	6.20	3.94	1.20	12.41	9.79	8.47	8.59	2.29	1.87	2.83	2.83	23.25	22.00	11.25	
Armour Fert. Works, Chicago...	Phosphate and Potash.....	3	9.40	7.29	3.89	5.28	2.70	2.10	15.99	14.67	13.29	12.57	.....	.....	2.26	2.66	19.00	18.75	40.25
Armour Fert. Works, Chicago.....	Wheat, Corn and Oats Special	3	4.18	2.65	5.52	5.66	2.43	3.97	12.13	12.28	9.70	8.31	1.34	1.22	2.33	2.23	20.50	19.00	11.50	
Baltimore Pulverizing Co., Balto...	Penniman's Special Guano...	36	2.07	5.58	1.30	8.95	7.65	1.65	2.45	19.50	
Baltimore Pulverizing Co., Balto...	Raw Bone.....	36	24.50	2.90	26.00	
Baltimore Pulverizing Co., Balto...	Corn and Oats Phosphate.....	36	1.39	7.77	2.33	11.49	9.16	0.66	1.45	16.50	
Baltimore Pulverizing Co., Balto...	Special Spring Mixture.....	36	0.91	6.07	1.60	8.58	6.98	0.66	1.38	14.25	
Baltimore Pulverizing Co., Balto...	Special Spring and Fall Mix...	31	5.95	1.10	2.78	6.77	1.01	1.56	9.72	9.43	8.70	7.87	.....	.....	4.24	2.06	16.75	13.50	43.25
Baugh & Sons Co, Baltimore, Md...	Warranted Pure Bone Meal....	16	.....	.....	.....	.....	.....	.....	21.15	21.93	.....	.....	3.92	3.84	.....	.....	27.00	27.25	40.25
Baugh & Sons Co, Baltimore, Md...	Warranted Pure Bone Meal....	21	.....	.....	.....	.....	.....	.....	20.39	.....	.....	.....	3.89	.....	.....	.....	26.00	40.50	
Baugh & Sons Co., Baltimore, Md...	Pure Dissolved Animal Bone...	16	4.86	2.78	9.74	1303	2.34	1.61	16.94	17.42	14.60	15.81	2.14	2.47	.....	.....	25.25	27.50	42.25
Baugh & Sons Co., Baltimore, Md...	Pure Dissolved Animal Bone...	16	1.33	1459	2.46	18.38	15.92	2.12	26.50	41.25	
Baugh & Sons Co., Baltimore, Md...	Double Eagle Phosphate.....	16	4.61	5.01	4.31	3.22	3.13	2.00	12.05	10.23	8.95	8.23	2.45	2.11	1.19	1.55	21.50	20.75	40.75	

* Plus.

† Minus.

TABLE II. — Continued.

NAME AND ADDRESS OF MANUFACTURER.	NAME OF BRAND.	Agent's Number.	Soluble Phosphate Acid in Official Sample.	Soluble Phosphate Acid in Inspector's Sample.	Reverted Phosphate Acid in Official Sample.	Reverted Phosphate Acid in Inspector's Sample.	Insoluble Phosphate Acid in Official Sample.	Insoluble Phosphate Acid in Inspector's Sample.	Total Phosphate Acid in Official Sample.	Total Phosphate Acid in Inspector's Sample.	Available Phosphate Acid in Official Sample.	Available Phosphate Acid in Inspector's Sample.	Nitrogen in Official Sample.	Nitrogen in Inspector's Sample.	Potash in Official Sample.	Potash in Inspector's Sample.	Valuation of Official Sample.	Valuation of Inspector's Sample.	Difference in Valuation.
Baugh & Sons Co., Baltimore, Md...	Double Eagle Phosphate.	16	5.81	3.52	3.52	3.52	1.83	1.16	11.16	9.33	9.33	2.01	2.10	2.10	2.10	2.10	22.25	20.00	*0.75
Baugh & Sons Co., Baltimore, Md...	Double Eagle Phosphate.	21	3.15	5.46	5.46	5.46	2.7	1.40	11.40	8.61	8.61	1.81	1.80	1.80	1.80	1.80	20.00	20.00	*1.50
Baugh & Sons Co., Baltimore, Md...	Double Eagle Phosphate.	8	5.49	2.61	2.61	2.61	3.93	12.03	12.03	8.10	8.10	2.42	2.34	2.34	2.34	2.34	23.25	23.25	*1.75
Baugh & Sons Co., Baltimore, Md...	General Crop Grower.	16	6.04	3.57	3.57	3.57	1.73	10.30	10.30	8.51	8.51	1.20	1.07	1.07	1.07	1.07	18.00	18.00	*0.25
Baugh & Sons Co., Baltimore, Md...	General Crop Grower.	16	6.59	2.52	2.52	2.52	1.28	10.39	10.39	9.11	9.11	1.10	1.10	1.10	1.10	1.10	18.25	18.25	
Baugh & Sons Co., Baltimore, Md...	General Crop Grower.	21	5.23	3.35	3.35	3.35	2.11	10.69	10.69	8.58	8.58	1.05	1.09	1.09	1.09	1.09	16.75	16.75	*1.50
Baugh & Sons Co., Baltimore, Md...	General Crop Grower.	8	6.70	2.02	2.02	2.02	0.95	9.67	9.67	8.72	8.72	1.00	3.72	3.72	3.72	3.72	20.25	20.25	*2.00
Baugh & Sons Co., Baltimore, Md...	General Crop Grower.	27	6.29	3.12	3.12	3.12	1.43	10.84	10.84	9.41	9.41	1.08	1.70	1.70	1.70	1.70	18.25	18.25	
Baugh & Sons Co., Baltimore, Md...	H. G. Ac. Phos. or Dis. S. C. R's	19	11.41	2.90	2.90	2.90	1.77	16.08	16.08	14.31	14.31	1.52	17.25	17.25	17.25	17.25	17.00	17.00	*0.25
Baugh & Sons Co., Baltimore, Md...	H. G. Ac. Phos. or Dis. S. C. R's	16	10.96	3.56	3.56	3.56	1.60	16.12	16.12	14.52	14.52	1.11	17.25	17.25	17.25	17.25	17.00	17.00	*0.25
Baugh & Sons Co., Baltimore, Md...	H. G. Ac. Phos. or Dis. S. C. R's	21	3.24	7.87	7.87	7.87	2.19	13.30	13.30	11.11	11.11	15.30	17.25	17.25	17.25	17.25	17.00	17.00	*0.75
Baugh & Sons Co., Baltimore, Md...	H. G. Ac. Phos. or Dis. S. C. R's	8	11.13	4.17	4.17	4.17	1.36	16.66	16.66	15.30	15.30	2.06	17.25	17.25	17.25	17.25	17.00	17.00	*0.75
Baugh & Sons Co., Baltimore, Md...	Export Bone with Potash.	32	4.90	2.45	2.45	2.45	1.71	11.92	11.92	10.21	10.21	1.66	17.25	17.25	17.25	17.25	17.00	17.00	*1.25
Baugh & Sons Co., Baltimore, Md...	Wheat Fer. for Wh't and G's.	27	7.76	4.88	4.88	4.88	1.70	11.64	11.64	9.94	9.94	1.03	18.00	18.00	18.00	18.00	18.00	18.00	
Bowker Fert. Co., Boston, Mass....	Bone Meal.	27	6.14	4.35	4.35	4.35	1.71	11.64	11.64	9.94	9.94	1.03	18.00	18.00	18.00	18.00	18.00	18.00	
Bowker Fert. Co., Boston, Mass....	Harvest Bone.	27	6.14	4.35	4.35	4.35	1.71	11.64	11.64	9.94	9.94	1.03	18.00	18.00	18.00	18.00	18.00	18.00	

*Plus.

†Minus.

TABLE II. — Continued.

NAME AND ADDRESS OF MANUFACTURER.	NAME OF BRAND.	Agent's Number.	Soluble Phosphoric Acid in Official Sample.	Soluble Phosphoric Acid in Inspector's Sample.	Reverted Phosphoric Acid in Official Sample.	Reverted Phosphoric Acid in Inspector's Sample.	Insoluble Phosphoric Acid in Official Sample.	Insoluble Phosphoric Acid in Inspector's Sample.	Total Phosphoric Acid in Official Sample.	Total Phosphoric Acid in Inspector's Sample.	Available Phosphoric Acid in Official Sample.	Available Phosphoric Acid in Inspector's Sample.	Nitrogen in Official Sample.	Nitrogen in Inspector's Sample.	Potash in Official Sample.	Potash in Inspector's Sample.	Valuation of Official Sample.	Valuation of Inspector's Sample.	Difference in Valuation.
			32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
Chemical Co., of Canton, Baltimore	Baker's Standard Gr'd Bone.	32	.....	.....	.....	.....	.....	.....	19.84	16.36	.....	.....	3.75	3.00	.....	.....	25.75	21.50	+4.25
Chemical Co., of Canton, Baltimore	Baker's Sp'l Wht. c'n & G's M'x	32	5.12	6.10	3.89	2.68	2.41	1.79	11.42	10.57	9.01	8.78	1.53	1.01	4.50	2.28	23.25	18.25	+5.00
Chemical Co., of Canton, Baltimore	Baker's Sp'l Wht. c'n & G's M'x	32	.....	4.89	.....	4.58	.....	1.55	.....	11.03	.....	9.47	.....	0.98	.....	2.99	.....	19.50	+3.75
Chemical Co., of Canton, Baltimore	Harrow Brand Crop Grower	32	4.53	4.81	3.95	4.90	2.71	1.54	11.19	10.75	8.48	9.21	1.05	0.95	2.15	1.36	18.25	17.25	+1.00
Chemical Co., of Canton, Baltimore	Harrow Brand Crop Grower	32	.....	5.29	.....	3.24	.....	1.97	.....	9.70	.....	8.63	.....	1.00	.....	1.96	.....	17.50	+0.75
Chemical Co., of Canton, Baltimore	Soluble Bone and Potash	32	11.32	7.55	2.69	3.29	0.64	0.96	14.65	11.80	14.01	10.81	.....	.....	4.60	2.05	22.00	16.00	+6.00
Chemical Co., of Canton, Baltimore	Soluble Bone and Potash	32	.....	6.05	.....	5.06	.....	0.82	.....	10.93	.....	10.11	.....	.....	.....	2.13	.....	15.50	+6.50
Chemical Co., of Canton, Baltimore	Baker's Pure Diss. S. C. Bone.	32	14.10	13.05	1.73	2.58	0.35	0.64	16.18	16.27	15.83	15.63	.....	.....	.....	.....	18.25	18.25	.....
Chemical Co., of Canton, Baltimore	Baker's Pure Diss. S. C. Bone.	32	.....	13.02	.....	2.62	.....	0.58	.....	16.22	.....	15.64	.....	.....	.....	.....	.....	18.50	*0.25
Chemical Co., of Canton, Baltimore	Baker's Pure Diss. S. C. Bone.	16	.....	12.47	.....	3.42	.....	0.74	.....	16.63	.....	15.89	.....	.....	.....	.....	.....	17.00	+1.25
Chemical Co., of Canton, Baltimore	Baker's Pure Diss. S. C. Bone.	32	.....	10.23	.....	4.04	.....	1.22	.....	15.49	.....	14.27	.....	.....	.....	.....	.....	17.50	+0.75
Chemical Co., of Canton, Baltimore	Baker's Pure Diss. S. C. Bone.	16	.....	10.63	.....	4.06	.....	1.37	.....	16.06	.....	14.69	.....	.....	.....	.....	.....	17.50	+0.75
Cleveland Dryer Co., Cleveland, O.	Phospho Bone.	14	6.35	5.09	3.05	3.97	1.60	2.47	11.00	11.53	9.40	9.06	0.89	1.09	1.51	1.47	17.00	18.00	*1.00
Cleveland Dryer Co., Cleveland, O.	Phospho Bone	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cleveland Dryer Co., Cleveland, O.	Potato, Tob. & Gen'l Crop Fert	14	5.76	6.82	3.44	2.55	2.70	2.35	11.90	11.72	9.20	10.28	.....	0.96	.....	1.63	24.25	24.00	+0.25
Cleveland Dryer Co., Cleveland, O.	XXX Phosphate.	15	8.70	10.06	5.61	4.41	3.95	2.69	15.27	17.16	14.32	14.47	.....	.....	.....	.....	17.00	17.50	*0.50

*Plus.

†Minus.

WEST VIRGINIA EXPERIMENT STATION.

TABLE II. — Continued.

NAME AND ADDRESS OF MANUFACTURER.	NAME OF BRAND.	Agent's Number.	Soluble Phosphate Acid in Official Sample.	Soluble Phosphate Acid in Inspector's Sample.	Reverted Phosphate Acid in Official Sample.	Reverted Phosphate Acid in Inspector's Sample.	Insoluble Phosphate Acid in Official Sample.	Insoluble Phosphate Acid in Inspector's Sample.	Total Phosphate Acid in Official Sample.	Total Phosphate Acid in Inspector's Sample.	Available Phosphate Acid in Official Sample.	Available Phosphate Acid in Inspector's Sample.	Nitrogen in Official Sample.	Nitrogen in Inspector's Sample.	Potash in Official Sample.	Potash in Inspector's Sample.	Valuation of Official Sample.	Valuation of Inspector's Sample.	Difference in Valuation.	
Cleveland Dryer Co., Cleveland, O.	XXX Phosphate.	2	7.93	5.67	5.67	2.06	15.66	13.60	13.60	13.60	13.60	13.60	13.60	13.60	13.60	13.60	13.60	16.50	10.50	10.50
Cleveland Dryer Co., Cleveland, O.	XXX Phosphate.	14	7.18	5.28	5.28	1.68	14.14	12.46	12.46	12.46	12.46	12.46	12.46	12.46	12.46	12.46	12.46	15.25	11.75	11.75
Cleveland Dryer Co., Cleveland, O.	Superior Bone Meal.	2	...	...	...	...	21.56	...	...	...	...	...	...	...	...	...	...	23.75	...	...
Cleveland Dryer Co., Cleveland, O.	Horsehead Phosphate.	15	6.41	3.45	3.74	6.04	9.92	4.45	11.07	13.91	10.15	9.49	...	...	...	...	...	13.00	13.25	0.25
Cleveland Dryer Co., Cleveland, O.	Horsehead Phosphate.	25	...	3.88	...	5.73	4.14	...	13.75	...	9.61	...	...	...	...	...	...	13.25	0.25	...
Cleveland Dryer Co., Cleveland, O.	Horsehead Phos. with Potash.	15	7.11	4.52	3.88	4.92	0.90	3.83	11.87	13.27	10.99	9.44	...	...	2.13	1.85	16.25	15.25	1.00	...
Cleveland Dryer Co., Cleveland, O.	Horsehead Phos. with Potash.	16	...	6.78	...	2.72	...	2.90	12.40	...	9.50	...	...	...	1.89	...	...	15.00	1.25	...
Cleveland Dryer Co., Cleveland, O.	Square Bone.	15	2.88	3.89	1058	8.28	5.37	5.42	18.84	17.59	13.46	12.17	2.30	2.05	...	...	25.50	23.25	2.25	...
Cleveland Dryer Co., Cleveland, O.	Square Bone.	7	...	1.62	...	1112	...	7.79	20.53	...	12.74	...	...	...	2.11	...	...	24.75	0.75	...
Crocker Fert. & Chem. Co., Buffalo.	General Crop Phosphate.	28	4.40	4.70	2.94	3.62	2.41	1.13	9.75	9.45	7.34	8.32	1.29	0.94	1.08	1.40	16.50	16.25	0.25	...
Crocker Fert. & Chem. Co., Buffalo.	Potato, Hop and Tobacco Phos	28	4.13	4.03	3.92	3.45	4.03	2.26	12.08	9.74	8.05	7.48	2.36	1.94	3.24	3.80	24.00	22.25	1.75	...
Crocker Fert. & Chem. Co., Buffalo.	Erle Phosphate	28	...	5.27	...	4.61	...	1.94	11.82	...	9.88	...	...	...	...	...	...	13.00	...	...
Detrick Fert. & Chem. Co., Balto...	Dissolved S. C. Bone...	36	11.36	12.98	2.89	3.40	1.33	1.34	15.58	17.72	14.25	16.38	...	...	...	...	17.00	19	0.200	...
Detrick, Louis F., Baltimore	XXtra Acid Phosphate.	24	11.71	10.99	2.60	3.32	1.30	1.36	15.61	15.67	14.31	14.31	...	...	...	...	17.00	17.00	...	...

*Plus.

†Minus.

TABLE II.—Continued.

NAME AND ADDRESS OF MANUFACTURER.	NAME OF BRAND.	Agents Number.	Soluble Phosphoric Acid in Official Sample.	Soluble Phosphoric Acid in Inspector's Sample.	Reverted Phosphoric Acid in Official Sample.	Reverted Phosphoric Acid in Inspector's Sample.	Insoluble Phosphoric Acid in Official Sample.	Insoluble Phosphoric Acid in Inspector's Sample.	Total Phosphoric Acid in Official Sample.	Total Phosphoric Acid in Inspector's Sample.	Available Phosphoric Acid in Official Sample.	Available Phosphoric Acid in Inspector's Sample.	Nitrogen in Official Sample.	Nitrogen in Inspector's Sample.	Potash in Official Sample.	Potash in Inspector's Sample.	Valuation of Official Sample.	Valuation of Inspector's Sample.	Difference in Valuation.
Marietta Bone and Phos. Co., Marietta, O.	Bone and Animal Tankage.	33	.....	.....	.....	.....	.....	.....	12.29	11.93	.....	.....	2.23	1.63	1.89	1.43	19.00	16.50	+2.50
Maryland Fert. & Mfg. Co., Balto. . .	Dissolved S. C. Bone.	23	11.73	10.30	2.93	3.53	0.72	2.00	15.38	15.83	14.66	13.83	.....	.....	.....	.....	17.25	16.75	+0.50
Maryland Fert. & Mfg. Co., Balto. . .	Bone Superphosphate.	35	8.20	7.37	7.38	3.18	0.54	1.19	16.12	11.74	15.68	10.55	.....	.....	2.20	2.26	20.75	16.50	+4.25
Maryland Fert. & Mfg. Co., Balto. . .	Bone Superphosphate.	23	.....	8.41	.....	3.18	.....	1.05	.....	12.64	.....	11.50	.....	.....	.....	.....	1.88	.....	+1.00
Northwestern Fert. Co., Chicago . . .	Garden City Superphosphate.	27	5.04	5.33	2.28	3.23	3.45	2.19	10.77	10.75	7.32	8.56	2.14	1.77	2.46	2.35	21.50	12.00	+9.50
Ober, G., & Sons Co., Baltimore, Md	Farmer's Ammoniated Phos. . .	5	8.70	8.34	1.63	3.03	0.93	2.41	11.26	13.78	10.33	11.37	1.90	1.72	2.75	2.58	23.25	23.75	*0.50
Ober, G., & Sons Co., Baltimore, Md	Shenandoah Bone Phosphate.	36	7.00	9.08	2.28	1.91	1.59	2.06	10.87	13.05	9.28	10.94	2.24	1.76	4.39	2.83	25.50	23.75	+1.75
Ober, G., & Sons Co., Baltimore, Md	Shenandoah Bone Phosphate.	12	.....	7.88	.....	2.67	.....	2.69	.....	13.24	.....	10.55	.....	.....	1.99	.....	3.20	.....	+0.50
Ober, G., & Sons Co., Baltimore, Md	S. & S. Special Wheat Comp . .	31	6.73	7.94	2.57	2.91	1.89	2.34	11.19	13.19	9.30	10.85	2.15	1.83	4.74	2.51	25.75	23.50	+2.25
Ober, G., & Sons Co., Baltimore, Md	Farmer's Mixture.	36	9.08	8.69	1.46	2.10	0.87	0.90	11.36	11.69	10.49	10.79	1.16	1.20	2.58	2.30	20.50	20.75	*0.25
Ober, G., & Sons Co., Baltimore, Md	Farmer's Mixture.	16	.....	8.61	.....	1.93	.....	0.87	.....	11.41	.....	10.54	.....	.....	1.16	.....	2.35	.....	+0.50
Ober, G., & Sons Co., Baltimore, Md	Farmer's Mixture.	5	.....	3.65	.....	5.89	.....	4.94	.....	14.48	.....	9.54	.....	.....	1.43	.....	2.59	.....	*1.00
Ober, G., & Sons Co., Baltimore, Md	Farmer's Mixture.	27	.....	6.58	.....	4.19	.....	2.94	.....	13.61	.....	10.77	.....	.....	1.26	.....	2.65	.....	*1.25
Ober, G., & Sons Co., Baltimore, Md	Dissolved Bone Phosphate.	30	12.28	12.74	2.50	4.20	0.87	0.48	15.74	17.42	14.87	16.94	.....	.....	.....	.....	17.50	19.25	*1.75
Ober, G., & Sons Co., Baltimore, Md	Dissolved Bone Phosphate.	26	.....	12.60	.....	3.66	.....	0.84	.....	17.10	.....	16.26	.....	.....	.....	.....	.....	18.75	*1.25

* Plus.

† Minus.

TABLE II.—Continued.

NAME AND ADDRESS OF MANUFACTURER.	NAME OF BRAND.	Agent's Number.	Soluble Phosphoric Acid in	Soluble Phosphoric Acid in	Reverted Phosphoric Acid	Reverted Phosphoric Acid	Insoluble Phosphoric Acid	Insoluble Phosphoric Acid	Total Phosphoric Acid in	Total Phosphoric Acid in	Available Phosphoric Acid	Available Phosphoric Acid	Nitrogen in Official Sample.	Nitrogen in Inspector's Sam-ple.	Potash in Official Sample.	Potash in Inspector's Sample	Valuation of Official Sam-ple.	Valuation of Inspector's Sample	Difference in Valuation.
			Official Sample.	Inspector's sample.	In Official Sample.	Inspector's Sample.	In Official Sample.	In Inspector's Sample.	Official Sample.	Inspector's Sample.	Official Sample.	Inspector's Sample.	Official Sample.	Inspector's Sample.	Official Sample.	Inspector's Sample.	Official Sample.	Inspector's Sample.	Official Sample.
Ober, G., & Sons Co., Baltimore, Md	Dissolved Bone Phosphate.....	36	13.27	3.25	0.49	17.01	16.52	19.00	*1.50										
	Dissolved Bone Phosphate ..	31	11.72	3.83	1.82	17.37	15.55	18.25	*0.75										
	Dissolved Bone Phos. & Potash	31	9.53	3.57	2.14	7.33	0.68	4.39	12.35	15.89	11.67	11.50	2.51	2.63	17.50	18.25	*0.75		
	Dissolved Bone Phosphate.....	27	11.94	4.46	1.60	18.00	16.40	19.25	*1.75										
	Dissolved Bone Phosphate ..	31	11.31	4.54	1.68	17.53	15.85	18.50	*1.00										
Ohio Farmers Fer. Co., Columbus, O	Acid Phosphate.....	20	7.32	2.02	2.41	6.27	1.75	2.49	11.51	10.78	9.76	8.29	12.75	11.25	11.50	11.25	*1.50		
	General Crop Fish Guano.....	20	8.48	1.29	1.53	4.37	2.03	2.21	12.00	7.87	10.03	5.66	1.12	0.91	2.69	1.33	20.25	13.75	*6.50
	Corn, Oats & Wheat Fish Guan	20	7.28	2.81	1.33	4.33	2.00	1.66	13.61	8.70	11.61	7.04	1.79	1.31	2.73	2.43	21.25	18.00	*6.25
	Pacific Guano Co., New York.....	3	9.54	3.01	3.67	7.02	2.35	1.75	15.56	12.41	13.21	10.66	2.20	2.44	18.75	16.50	16.50	16.50	*2.25
	Pacific Guano Co., New York.....	Dissolved Bone Phos. of Lime	3	12.46	10.38	1.99	4.01	1.09	1.71	15.54	16.13	14.45	14.42	15.06	17.00	17.25	17.25	17.25	*0.25
R. H. Pollock, Baltimore.....	Pollock's S. C. Bone.....	36	10.87	12.86	4.59	2.20	1.22	0.55	16.68	15.61	15.46	15.06	1.11	2.31	18.25	17.50	18.25	17.50	*0.75
	Pollock's Special Wheat.....	36	6.27	2.24	1.48	9.99	8.51	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
Resin-Monumental Co., Balto., Md.	Acid Phosphate.....	4	12.83	12.20	1.11	2.05	1.64	1.13	14.58	15.38	13.94	14.25	15.06	17.00	17.00	17.00	17.00	17.00	*0.50
	Acid Phosphate.....	4	2.64	9.05	2.46	14.75	12.29	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	*1.25
	Mon't Wm. Penn Crop Grower	13	8.26	7.51	1.83	5.90	1.23	1.25	11.32	14.66	10.09	13.41	1.13	0.66	1.34	0.79	18.75	19.50	*1.25

*Plus.

+Minus.

TABLE II.—Continued.

NAME AND ADDRESS OF MANUFACTURER.		NAME OF BRAND.		Agent's Number.	COMMERCIAL FERTILIZERS.												Difference in Valuation.			
					Soluble Phosphoric Acid in Official Sample.	Soluble Phosphoric Acid in Inspector's Sample.	Reverted Phosphoric Acid in Official Sample.	Reverted Phosphoric Acid in Inspector's Sample.	Insoluble Phosphoric Acid in Official.	Insoluble Phosphoric Acid in Inspector's Sample.	Total Phosphoric Acid in Official Sample.	Total Phosphoric Acid in Inspector's Sample.	Available Phosphoric Acid in Official Sample.	Available Phosphoric Acid in Inspector's Sample.	Nitrogen in Official Sample.	Nitrogen in Inspector's Sample.	Potash in Official Sample.	Potash in Inspector's Sample.	Valuation of Official Sample.	Valuation of Inspector's Sample.
Scientific Fertilizer Co., Pittsburg..	Scientific Corn & Grain Fert.....	9		1.68	3.98	4.75	10.41	4.75	10.41	5.66	1.77	2.41	18.75	1.77	2.41	18.75	18.75	18.75	18.75	18.75
Scientific Fertilizer Co., Pittsburg..	Scientific Economy Fert.....	9		5.32	2.17	2.55	10.01	2.55	10.01	7.49	1.63	3.61	21.00	1.63	3.61	21.00	21.00	21.00	21.00	21.00
Susquehanna Fert. Co., Baltimore.	XXV Phosphate.....	26		6.18	2.86	2.47	11.95	2.47	11.95	9.02	1.16	1.46	17.75	1.08	1.30	18.25	17.75	17.75	17.75	17.75
Susquehanna Fert. Co., Baltimore.	XXV Phosphate.....	26		1.50	7.02	3.94	12.46	3.94	12.46	8.52	1.07	1.85	18.25	1.07	1.85	18.25	18.25	18.25	18.25	18.25
Susquehanna Fert. Co., Baltimore.	Superior Rock Phosphate.....	26		11.92	3.58	3.23	17.1	1.50	17.21	16.12	15.50	14.62	18.25	15.98	15.98	18.25	17.50	17.50	17.50	17.50
Susquehanna Fert. Co., Baltimore.	Dissolved S. C. Bone.....	26		12.24	3.75	0.97	16.95	0.97	16.95	15.98	15.98	15.98	18.50	15.98	15.98	18.50	18.50	18.50	18.50	18.50
Swift & Co., Chicago.....	Phosphate and Potash.....	11		9.21	4.83	4.49	15.26	4.49	15.26	12.74	14.07	11.60	11.60	1.58	2.86	18.75	17.75	17.75	17.75	17.75
Swift & Co., Chicago.....	Ammonia, Bone and Potash.....	31		6.78	3.20	6.70	2.44	5.72	12.42	16.48	9.98	10.76	25.75	1.88	2.84	25.75	21.50	21.50	21.50	21.50
Swift & Co., Chicago.....	Ammonia, Bone and Potash.....	36		6.69	3.53	5.59	15.81	5.59	15.81	10.22	1.95	1.71	23.00	1.95	1.71	23.00	22.00	22.00	22.00	22.00
Swift & Co., Chicago.....	Ammonia, Bone and Potash.....	31		5.82	2.81	3.48	12.11	3.48	12.11	8.63	2.00	2.90	22.75	2.00	2.90	22.75	23.00	23.00	23.00	23.00
Swift & Co., Chicago.....	Complete Fertilizer.....	27		5.87	2.71	6.81	3.79	1.24	11.87	12.81	8.08	11.57	19.00	1.42	1.36	19.00	21.25	21.25	21.25	21.25
Swift & Co., Chicago.....	Bone Meal.....	36					25.59	25.50	25.59	25.50	2.68	2.79	26.00	2.68	2.79	26.00	26.25	26.25	26.25	26.25
Swift & Co., Chicago.....	Bone Meal.....	4					25.89		25.89		2.94		27.00	2.94		27.00	26.25	26.25	26.25	26.25
Swift & Co., Chicago.....	Bone Meal.....	11					25.07		25.07		2.74		26.00	2.74		26.00	26.00	26.00	26.00	26.00
Swift & Co., Chicago.....	Diamond <s> Phosphate.....	4		8.83	4.87	4.38	14.93	1.23	14.93	11.58	13.70	10.24	16.50			16.50	13.20	13.20	13.20	13.25
Swift & Co., Chicago.....	Diamond <s> Phosphate.....	7		6.05	5.74	1.94	13.73	1.94	13.73	11.79			14.75			14.75	14.75	14.75	14.75	14.75
																				</

*Plus.

†Minus.

TABLE II. — Continued.

NAME AND ADDRESS OF MANUFACTURER.	NAME OF BRAND.	Agent's Number.	Soluble Phosphoric Acid in Official Sample.	Soluble Phosphoric Acid in Inspector's Sample.	Reverted Phosphoric Acid in Official Sample.	Reverted Phosphoric Acid in Inspector's Sample.	Insoluble Phosphoric Acid in Official Sample.	Insoluble Phosphoric Acid in Inspector's Sample.	Total Phosphoric Acid in Official Sample.	Total Phosphoric Acid in Inspector's Sample.	Available Phosphoric Acid in Official Sample.	Available Phosphoric Acid in Inspector's Sample.	Nitrogen in Official Sample.	Nitrogen in Inspector's Sample.	Potash in Official Sample.	Potash in Inspector's Sample.	Valuation of Official Sample.	Valuation of Inspector's Sample.	Difference in Valuation.
Swift & Co., Chicago.....	Diamond <S> Phosphate.....	10	5.25	4.74	4.74	4.74	1.52	1.52	11.51	10.23	9.99	9.99	2.71	2.72	2.41	2.52	13.00	23.50	10.50
Swift & Co., Chicago.....	Superphosphate.....	29	5.81	3.51	2.86	5.08	2.46	14.40	10.23	9.92	7.77	7.77	2.71	2.72	2.41	2.52	23.75	22.00	1.75
Swift & Co., Chicago.....	Superphosphate.....	27	5.48	3.49	3.49	3.49	2.48	11.15	11.15	11.15	8.97	8.97	2.71	2.72	2.41	2.52	25.50	20.25	5.25
Virginia-Carolina Chemical Co., Allison & Addison Branch, Richmond, Va.	Star Brand Guano.....	27	7.87	4.48	0.97	4.01	2.02	2.64	11.13	8.84	8.40	8.40	1.61	1.65	1.14	1.48	19.25	19.25	0.00
	Little Giant Gr'n and Gr's, Gr.	27	8.44	5.37	0.30	2.97	1.85	2.83	10.50	11.17	8.74	8.31	0.89	1.05	2.54	2.36	18.00	18.25	0.25
	Standard Acid Phosphate.....	27	6.63	6.47	6.17	6.09	1.98	3.28	14.78	15.81	12.80	12.56	.....	.....	.....	.....	15.75	13.25	2.50
Williams & Clark-Fert. Co., New Yk	Prolific Crop Producer.....	11	5.53	3.51	2.03	4.27	1.60	2.21	9.16	9.99	7.56	7.78	1.05	1.09	1.39	1.47	16.00	16.75	0.75
Williams & Clark Fert. Co., New Yk	"Acorn" Brand Acid Phos.....	6	12.73	10.67	2.33	3.71	1.15	1.59	16.21	15.97	15.03	14.38	.....	.....	.....	.....	17.75	17.25	0.50
Zell Guano Co., Baltimore, Md.....	Zell's Economizer.....	1	8.19	8.41	0.36	2.27	2.61	2.37	11.16	13.05	8.55	10.68	0.82	1.03	2.00	2.08	17.25	20.75	3.50
Zell Guano Co., Baltimore, Md.....	Zell's Little Giant.....	17	7.42	4.75	0.08	2.82	2.43	1.70	9.93	9.27	7.50	7.57	0.89	1.04	1.32	1.28	15.50	16.00	0.50
Zell Guano Co., Baltimore, Md.....	Zell's Electric Phosphate.....	17	9.59	6.26	0.77	4.18	2.32	1.25	12.68	11.69	11.36	10.44	.....	.....	2.00	2.25	16.25	16.00	0.25
Zell Guano Co., Baltimore, Md.....	Zell's Dissolved Bone Phos.....	2	13.01	13.87	1.05	2.93	2.11	0.52	16.17	17.32	14.08	16.80	.....	.....	.....	.....	17.00	19.25	2.25
Zell Guano Co., Baltimore, Md.....	Zell's Dissolved Bone Phos.....	18	13.18	13.18	2.81	2.81	0.68	.....	16.67	16.67	15.99	15.99	.....	.....	.....	.....	18.50	18.50	0.00
Zell Guano Co., Baltimore, Md.....	Zell's S. C. Phosphate.....	17	11.00	10.44	2.12	3.93	1.29	15.17	15.66	13.12	14.37	14.37	.....	.....	.....	.....	16.00	17.00	1.00

*Plus.

‡Minus.

Agents from whom samples were collected during 1900.

Agent's Number.	Name.	Address.
1.....	J. W. Arnett.....	Silbydale.
2.....	W. H. Brand.....	Laurel Point.
3.....	M. W. Carney.....	Asbury.
4.....	George T. Carscadon.....	Keyser.
5.....	J. J. Chisler.....	Fairmont.
6.....	Andy Click.....	Cottageville.
7.....	W. L. Cole.....	Clarksburg.
8.....	L. W. Conway.....	Laurel Point.
9.....	Peter S. Crouch.....	South Side.
10.....	Dowler & Dowler.....	Wheeling.
11.....	W. R. Dudley.....	Wheeling.
12.....	James Eagan.....	Charles Town.
13.....	L. D. Getzendiner.....	Charles Town.
14.....	Gross & Judy.....	Lewisburg.
15.....	S. A. Hay.....	Burnsville.
16.....	Henshaw & Lichlider.....	Martinsburg.
17.....	Hutchinson & Jacobs.....	Little Falls.
18.....	Johnson & Gwin.....	Ronceverte.
19.....	Josephus Jones.....	Morgantown.
20.....	E. S. Kinsley and A. R. Price.....	Uffington.
21.....	R. T. Lowndes.....	Clarksburg.
22.....	W. H. McAllister.....	Hurricane.
23.....	McKown & Busey.....	Martinsburg.
24.....	McClung & Rader.....	Ronceverte.
25.....	Walter Marshall.....	Wheeling.
26.....	J. H. Miller & Sons.....	Martinsburg.
27.....	J. M. Miller & Bros.....	Ronceverte.
28.....	Mossman Bros.....	Huntington.
29.....	J. W. Reeve.....	Fairmont.
30.....	John J. Ringer.....	Morgantown.
31.....	Sencendiver & Stewart.....	Martinsburg.
32.....	C. W. Seiver.....	Keyser.
33.....	H. L. Stewart.....	Friendly.
34.....	H. M. Stewart.....	Danstown.
35.....	William Watkins.....	Morgantown.
36.....	Washington & Alexander.....	Charles Town.

AN ACT CONCERNING COMMERCIAL FERTILIZER ,
STATE OF WEST VIRGINIA.

CHAPTER LXXII.

AN ACT concerning Commercial Fertilizers and repealing chapter twenty-five of the Acts of the Legislature of West Virginia of 1879.

[Passed March 6th, 1891.]

Be it enacted by the Legislature of West Virginia:

1. Every person or company who shall sell, offer or expose for sale in this State, any commercial fertilizer or manure, shall affix conspicuously to every package thereof a plainly printed statement, clearly and truly certifying the number of net pounds of fertilizer in the package, the name, brand or trade-mark under which the fertilizer is sold, the name and address of the manufacturer, the place of manufacture, and a chemical analysis, stating the percentage of nitrogen or its equivalent in ammonia, of potash soluble in distilled water, and of phosphoric acid in available form, soluble in distilled water, and reverted, as well as the total phosphoric acid. In the case of those fertilizers which consist of other cheaper materials, said labels shall give a correct general statement of the composition and ingredients of the elements relied upon, contained in the fertilizer which it accompanies. If any such fertilizer be sold in bulk, such printed statement shall accompany and go with every lot and parcel sold, offered or exposed for sale.

2. Before any commercial fertilizer is sold, offered or exposed for sale in this State, the manufacturer, importer or party who causes it to be sold, exposed or offered for sale, shall file with the Director of the West Virginia Agricultural Experiment Station a certified copy of the statement named in section one of this Act, and shall also deposit with said Director a sealed glass jar or

bottle, or sealed tin can, containing not less than one pound of fertilizer named and described in said statement, accompanied by an affidavit that it is a fair average sample thereof. The making of any affidavit required by this chapter falsely, shall be perjury.

3. The manufacturer, importer, agent or seller of any brand of commercial fertilizer or material used for manurial purposes, shall pay for each brand at the time he files the statement required in section one of this Act, an analysis fee of ten dollars for each of the fertilizing ingredients claimed to exist in each and every brand of fertilizer which he sells, offers or exposes for sale within this State, provided that whenever the manufacturer, or importer shall have paid the analysis fee herein required, for any particular brand of fertilizer, no agent or seller shall be required to pay any other or further analysis fee for said brand.

4. The analysis fee required to be paid by section three of this Act shall be paid to the Treasurer of the West Virginia University for the use of the Agricultural Experiment Station, and the party making such payment shall take from said Treasurer triplicate receipts therefor, one of which he shall retain, and the others shall be deposited, one with the Director of the Agricultural Experiment Station, and the other with the Secretary of the Board of Regents of the West Virginia University, and by them filed and preserved in their respective offices.

5. Immediately after the filing of the receipt aforesaid with the Director of the Agricultural Experiment Station, said Director shall issue a certificate to the party making such payment, stating the amount of fees paid, and the name, brand of trade-mark under which the fertilizer is sold, the name and address of the manufacturer or importer, the place of manufacture and the name and place of business of the dealer, and the chemical analysis as set forth in the statement by section, one of this Act, and that the applicant for said certificate is authorized to sell said fertilizer within the State of West Virginia for the period of one year from the first day of January to the 31st day of December, inclusive. Said certificates may be issued at any time for and during the current year, and may be issued during the month of December for the year commencing on the first day of January thereafter.

6. It shall be the duty of the Director of the West Virginia Agricultural Experiment Station to make or cause to be made a chemical analysis of every sample of commercial fertilizer so furnished him, and he shall print the result of such analysis in the form of a label or tag. Such printed label or tag shall set forth the name of the manufacturer, the place of manufacture, the brand of the fertilizer, and the essential ingredients contained in said fertilizer, expressed in terms and manner approved by the Director, together with a certificate from the Director, setting forth that said analysis is a true and complete analysis of the sample furnished him of such brand of fertilizer of the ingredients claimed to be contained therein. And he shall also place upon each label or tag the money value per ton of such fertilizer, computed from its composition as he may determine. The Director shall furnish such labels or tags in quantities of one hundred or multiple thereof, to any person or company complying with this act, and desiring to sell, offer or expose for sale, any commercial fertilizer in this State, and shall receive therefor the sum of fifty cents for every one hundred so delivered, and shall without delay pay the same to the Treasurer of the West Virginia University for the use of the Agricultural Experiment Station, and take duplicate receipts therefor, one of which he shall retain and the other he shall deliver to the Secretary of the Board of Regents, who shall file and preserve the same in his office.

7. The Board of Regents of the West Virginia University shall expend the money received under the provisions of this Act in meeting the legitimate expenses of the Station, in making analysis of fertilizers, in experimental tests of same, and in such other experimental work and purchases as shall inure to the benefit of the farmers of this State, and shall include in their annual report a statement of the receipts and disbursements thereof.

8. The Director of said Experiment Station is hereby authorized in person or by deputy to take sample for analysis from any lot or from any commercial fertilizer which may be in possession of any dealer in the State. And he is hereby authorized to prescribe and enforce such rules as he may deem necessary to carry fully into effect the true intent and meaning of this act; and any

agriculturist, a purchaser of any commercial fertilizer in this State, may take a sample of the same under the rules and regulations of the Director of the said Experimental Station, or forward the same to the Experimental Station for analysis, and if the Director has reason to believe that the manufacturer of, or dealer in said fertilizer has made any false or fraudulent representation in regard to said fertilizer, he shall cause the said sample to be analyzed free of charge, and certify the same to the person forwarding the sample.

9. Said Director shall also publish by bulletin, the brand, name and location of the manufacturer, and chemical analysis of every fertilizer analyzed or caused to be analyzed by him. Said last publication to be made, if practicable, before the time at which said fertilizer is to be applied to the soil.

10. Any manufacturer or vendor of any chemical fertilizer who shall sell, or offer or expose for sale, any commercial fertilizer without having previously complied with the provisions of this act herein before set forth, shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be fined not less than fifty nor more than five hundred dollars.

11. Any company, firm or person who shall willfully remove from or deface or change any label, or tag, or brand affixed to any package of fertilizer under the provisions of this act, before such fertilizer has been used for manurial purposes, or who shall sell such fertilizer without such label or tag being affixed thereto at the time of the sale, shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be fined not less than ten nor more than fifty dollars for each offense.

12. Any company, firm or person who shall remove from or cause to be removed from any package of commercial fertilizer any statement, label or tag affixed thereto under the provisions of this Act, and affix or cause the same to be affixed to any other package of commercial fertilizer shall be deemed guilty of misdemeanor, and upon conviction thereof, shall be fined not less than ten nor more than fifty dollars for each offense.

13. Any company, firm or person violating any of the provisions of this Act, or who fails to comply with the requirements of

this Act, shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall, when no other penalty is prescribed, be fined not less than ten nor more than one hundred dollars for each offense. But this act shall not be construed to apply to anyone who manufactures fertilizers for his own use and not for sale.

14. The Director of said Experiment Station shall report to the prosecuting attorney of the county wherein the offense was committed, all violations of the provisions of this Act, and failure to comply therewith, and a copy of any statement, label or tag required to be filed with said Director, shall be received in evidence in any prosecution or a suit for any violation of the provision of this Act.

15. That Chapter 25 of the Acts of the Legislature of West Virginia, passed on the 4th day of March, 1879, entitled "An Act to Protect the Purchasers of Fertilizers in this State," be and the same is hereby repealed.

NOTICE.

Application for bulletins of this Station should be addressed to the Director of the West Virginia Agricultural Experiment Station, Morgantown, W. Va.

(The bulletins named below are available for distribution.)

- No. 4. The Creamery Industry; Its Adaptability to West Virginia
- No. 5. The Selection of Milch Cows.
- No. 14. Farm and Garden Insects and Experiments with Remedies; Notes of the Season.
- No. 15. Raspberry Gouty-Gall Beetle.
- No. 16. Yellow Locust, Insect Ravages upon.
- No. 17. Black Spruce, Insect Ravages.
- No. 19. Your Weeds and Your Neighbor's, Part 1. Weeds as Fertilizers.
- No. 25. Plat Experiments with Commercial Fertilizers on Wheat.
- No. 27. Notes on Pruning.
- No. 28. Plat Experiments with Commercial Fertilizers on Corn.
- No. 29. Experiments with Potatoes at the Station. Experiments on Corn at the Out Stations.
- No. 30. Address and Notes on Sheep.
- No. 33. Sub-Irrigation in the Green House.
- No. 38. Potato Blight, Potato Scab.
- No. 42. Vegetables.
- No. 43. When, Why, What and How to Spray.
- No 44. Practical Entomology.
- Special Bulletin No. 2. Proceedings connected with the celebration upon the completion of the Station Building and the organization of the Sheep Breeders and Wool Growers' Association and the State Horticultural Society.

Third Annual Report, 1890.

No. 54. Nursery Hints.

No. 55. Sugar Beets.

No. 58. The Effect of Pressure in the Preservation of Milk.

No. 59. Whole Corn Compared with Corn Meal for Fattening

No. 60. Poultry Experiments.

No. 61. Sheep Feeding Experiments.

No. 62. A Study of the Effects of Incandescent Gas-light on
Plant Growth.

No. 64. Sugar Beet Investigation in 1899.

No. 66. Fruit Diseases and How to Treat Them.

No. 67. The Hessian Fly in West Virginia.

